(with his master) being body pressed by the Croats, at the moment of action, cried "*Amen!*" there not being time, as he relates, to repeat the whole petition. Often, from the expenditure of a million sterling in modern buildings, the artist is not furnished with one example for his pencil, while in old fabrics, though there may be nothing else, some chimney-piece, some doorway, some font, or other object of art which never cost five pounds, may furnish him with a beautiful subject. Money is powerful, but science and taste are enchanters.—Ed.]

THE CAMPHINE LIGHT.

Amongst the many improved lamps, the Camphine, which has been just introduced, is beyond all comparison the principal. The Argand, by which a stream of air was directed upon the interior, as well as the exterior, of the wick, was a stride in advance of its predecessors; the recent contrivance, by which in the Solar lamp the stream of external air is poured immediately on the ignited portion of the wick, instead of being supplied from below, was an improvement of the Argand; but superior as is the Solar to the common forms of lamps, it has its defects. The capillary attraction, from the glutinousness of the oil, is comparatively feeble; and, unless the reservoir is kept well filled, the light will become dim. The combustion of the oil is imperfect, and carbonaceous matter accumulates on the wick, which renders snuffing now and then imperative. Above all, the Solar requires, as all other lamps do, a nicety of attention, that domestics can rarely be persuaded to give. There is another evil attendant on burning oil, that by no contrivance can be got rid of—the disagreeable nature of the oil itself. Let the utmost care be employed, accidents will happen in using it, and clothes and carpets, to say nothing of hands, will suffer from the contact. From all these drawbacks the Camphine lamp is free. From the manner in which the burner is contrived, and from the extreme liquidity of the fluid employed, the combustion is so perfect, that the wick, after ten or twelve hours' consecutive burning, is scarcely if at all charred. Then, by reason of the same liquidity, the capillary attraction is so active, that a flame of undiminished brightness will remain until the wick itself is actually dry! The reservoir once filled, there is no necessity in the course of sixteen hours for any additional supply. The flame of the Solar is much more intense than that of the Argand; but the flame of the Camphine is absolutely dazzling—whiter than the best gas, while it has not that disagreeable flickering that all lights are liable to; by the light of the Camphine, colours may be distinguished as readily as by daylight. English's Patent Camphine (for which her Majesty's Letters Patent have been granted) is in itself so far from being injurious, that, if accidentally spilt on the most delicate tissue, instead of soiling, should there be any spot of grease on the garment, it will effectually remove it. The trimming is a task in which the most delicate fingers may be employed; it is unaccompanied by the slightest smell in lighting, which is instantaneously effected; and as little is any smell perceptible on its being extinguished, which also is the work of a moment. The Camphine lamp requires but one act of attention—that is, to cut the edge of the wick even with the edge of the tube, *and leave it so.* With this one care the lamp never goes wrong, never intermits, but shines on, from sunset to morning, with an even, steady, pure, and beautiful light.—*Hull Packet.*

Electricity at Breakfast.—In fact, startling as it may seem, it is beyond contradiction certain, that the largest charge of the largest Leyden battery does not equal in quantity the electricity which passes between the tongue and a silver spoon, during the simple act of eating an egg. Indeed, if the quantity developed in the latter case were free to assume the form of the electricity obtained from friction, the result would be a lightning-flash of no small power. The chemical action of a grain of water upon four grains of zinc can evolve electricity equal in quantity to that of a powerful thunder-storm.—*Electricity, by Dr. Lardner and C. V. Walker.*

IMPROVEMENTS IN BLOCKS, SHEAVES, &c.

The immense destruction of hempen rope, tackle falls, &c., in the naval and mercantile marine, together with the numerous accidents, in consequence of the splitting of wooden blocks, from "chouking," and other causes, induced Mr. A. Smith (inventor of the improved revolving iron shutters, door springs, and a number of other things for builders, &c.) to turn his attention to, and thoroughly investigate, the causes, with a view to remedying the evils.

The improvements made and suggested by him to the Admiralty Board, are partly explained in the following letter, addressed to the Hon. Sidney Herbert, M.P., Secretary to the Admiralty, &c., &c.:—

"Iron-Works, Princes-street, Leicester-square.

"Sir,—I have to request that you will be pleased to lay before the Lords Commissioners of the Admiralty the accompanying improvements in the construction of sheaves for ships' blocks, and strappings for same, as also thimbles for ropes. The sectional sketches annexed, figs. 1, 2, 3, with the accompanying specimens, from No. 1 to 6, will make the improvements apparent. The two pieces of hempen rope having been working the same length of time and with the same quantity of weight suspended, the one over the ordinary wooden flat grooved sheave, figs. 1 and 2, and the other on the improved semicircular grooved iron sheave, fig. 3, fully demonstrate that a tackle fall, rove into a set of blocks with the improved sheaves, will ensure the rope's lasting considerably longer, and retaining its natural round form, instead of being compelled to take the flat distorted form of the groove in the ordinary wooden sheave, which is the case when a rope gets wet, and is under a strain tending not only to weaken the rope, but to chouk and split the block. The improved iron sheaves are not heavier than the ordinary wooden ones of equal strength, are cheaper in the first cost, will last much longer, and are not liable to warp. The improved thimbles are stamped out to the form of the rope, and allow of it retaining its natural strength. The patent wire rope strappings for blocks are stronger, lighter, and cheaper than hempen. I shall be much gratified if their Lordships will be pleased to allow a deposit in their Lordships' model room, in Somerset House, of the accompanying specimens of my patent wire rope strappings for blocks of from five to fifteen inches (such as I am about to supply for the use of her Majesty's ship *Penelope*, pursuant to their Lordships' demand to fit that ship), and which are numbered from 5 to 15; also a block, two sheaves, and two thimbles of my improved construction, together with fitted specimens of my patent wire-rope.

"I am, &c.,
"Andrew Smith.

"September 23, 1842."

Their Lordships examined, and highly approved of, the several improvements, and have most extensively adopted them.

Subsequently, Mr. Smith proposed an important improvement in blocks, substituting metal for wood, and introducing the improved semicircular grooved metal sheave, &c., models of which were laid before their Lordships, who were pleased to order the same for her Majesty's yacht, Victoria and Albert, which vessel was entirely fitted with the patent wire-rope, screw lanyards, thimbles, &c. The improved metal blocks, being formed without joining, and in one piece, will not split. The hook or eye is fastened, or made to swivel, in the shoulder of the block, requiring neither strap nor iron binding, which are so objectionable, yet absolutely necessary, in common wooden blocks; the straps are objectionable, as they become destroyed, in a short time, from exposure to the atmosphere, absorbing and retaining moisture, particularly in the splice at the lower part of the block, which becomes imperceptibly, but quickly, destroyed, while the other parts are comparatively sound and uninjured; thus it often happens, when tackle, after lying past some time unused, is again applied to raising heavy weights, though far below the weight they should bear with safety, the strap suddenly breaks (generally at or in the splice—sometimes in the throat of seizing), and the extent of accident depends upon the circumstances under which it took place. The improved metal blocks, being rounded off (having no sharp edges), do not injure the spars or gear, which is a great objection in iron-bound wood blocks, and cannot be obviated. The shell of the improved block, being hollow, as it were, with ribs, or strengthening pieces, placed vertically, and across them on each side, to support the pin upon which the sheave rotates, gives the greatest quantity of strength with the least weight—in fact, these blocks are, for the same size, not heavier than iron-bound wood blocks, while they possess about four times the strength, and will, doubtless, last more than four times as long, and, when worn out, they are worth near two-thirds of their first value. Under these circumstances, the expense, which at first is little more, will be very considerably less, than common blocks; besides the advantages, &c., already named, there are others of minor importance, too numerous to cite.

Fig. 1

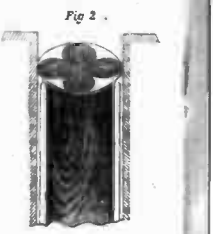
Fig 2.

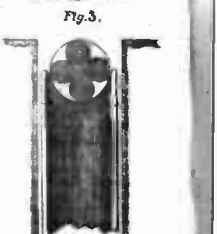
Fig. 3.

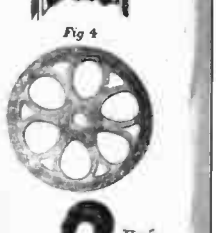
Fig 4

Fig. 6

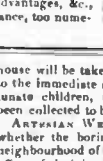
Fig 5 & 7

Infirmary for Children of Foreigners.—A committee is about to be formed, with a view to the foundation of an infirmary for the children of distressed foreigners. In aid of this laudable purpose, large sums have already been contributed both by the English and the resident foreigners. Contributions have also been received from foreigners of the highest rank residing on the Continent. A house will be taken and fitted up, with a view to the immediate relief of some of these unfortunate children, until sufficient funds have been collected to build a hospital.

Artesian Wells.—A question is mooted whether the boring of Artesian wells in the neighbourhood of Charing-cross will have the effect of draining the supply of water from the upper level springs of the metropolis.

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